Check Potential Impact of Social Media to Support Government Services in Jakarta Smart City.pdf

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Potential Impact of Social Media to Support Government Services in Jakarta Smart City

Evaristus Didik Madyatmadja
Information Systems Department,
School of Information Systems,
Computer Science Department,
BINUS Graduate Program-Doctor of Computer Science
Bina Nusantara University
Jakarta, Indonesia 11480
emadyatmadja@binus.edu

Edi Abdurachman
Computer Science Department,
BINUS Graduate Program-Doctor of Computer Science
Bina Nusantara University
Jakarta, Indonesia 11480
edia@binus.edu

Ford Lumban Gaol
Computer Science Department,
BINUS Graduate Program-Doctor of Computer Science
Bina Nusantara University
Jakarta, Indonesia 11480
fgaol@binus.edu

Bonifasius W. Pudjianto
Indonesian Creative Economy Agency
Jakarta, Indonesia
boni001@kominfo.go.id

Manik Hapsara
School Of Engineering and Information Technology
University of New South Wales
Australia
hapsara.manik@gmail.com

***Abstract*—The purpose of this initiative is to ensure that citizens use social media to access information about the state of the city. Social media application offers benefits in the form of a channel of communication between the community and the government or the group that has public interest. Through this application, the public could channel complaints about public services. Perception becomes the important key for this condition because user action is determined by their perception toward the government e-services. The result of standard measurement for customer satisfaction on government organization is used to help find the weakness of the service and correct it. The interfaces made to be more user-friendly to ensure the effective service. So, it is necessary to develop the system continuously. Perceived quality is one of the important determinants of the success of social media application, therefore needs identification of the user's perception and expectations and involving becomes the key to success besides the good quality that will increase the trust and satisfaction of users. Evaluation of social media applications is needed so that it can provide recommendations to the provincial government of DKI Jakarta related to what things can be done to improve community service.**

Keywords— government, social media, smart city

I. INTRODUCTION

Society should be involved to build the city using social media application. Social media application is connected with Smart City. The concept of Smart City is to increase the participation of public and government in utilizing the data, application, provide feedback and criticism easily (Http://smartcity.jakarta.go.id, 2016). The concept of Smart City has always been associated with a variety of technologies that can help improve the quality of life and manage the city resources more effectively and efficiently. The success of Smart City by adopting new technologies to increase innovation in the field of Information and Communication Technology to improve the standard of service that can be provided to the public [1]. As a result, various government initiatives are implemented in order to build services focused on the needs of the community and to provide better access to government services. The newest technology to coordinate and analyse the data is important, but the initiative of Smart City needs to involve the participation of citizens and communities of the city [2].

In order to provide initiative on the social media Smart City, the government has invested in resources, energy, time, and mind with the belief that it will improve the quality of services to citizens. The purpose of this initiative is to ensure that citizens use social media to access information about the state of the city. Social media application offers benefits in the form of a channel of communication between the community and the government or the group that has public interest. Through this application, the public could channel complaints about public services. Thus, the relevant agencies can act on the issue. The Government wants all citizens to report complaints about the things that went wrong in the environment. Government and society must serve each other; one of them is by using this social media application [3].

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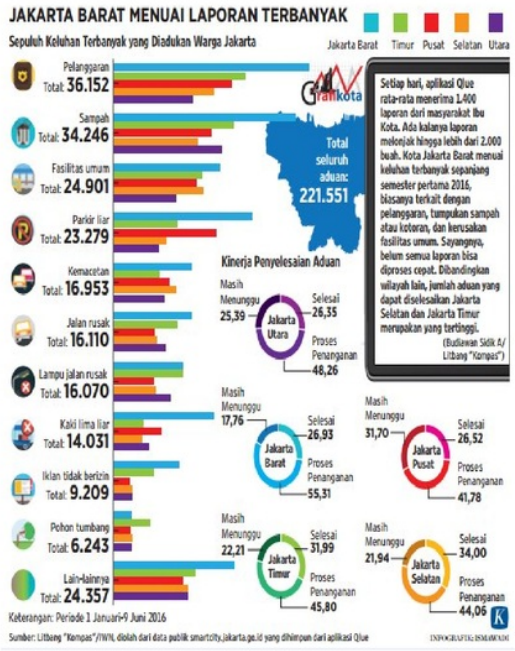


Fig. 1. An info graphic of public report (Http://smartcity.jakarta.go.id, 2016)

The purpose of this paper is to provide the recommendation to the provincial government of DKI Jakarta about what things can be done to improve public trust and satisfaction in using social media Smart City.

The research question of this study is what things that need to be done in developing social media application of Smart City by the Provincial Government of DKI Jakarta to improve services to the public. Evaluation of Social Media features is needed so that it can provide recommendations to the provincial government of DKI Jakarta related to what things can be done to improve community service in using this social media application.

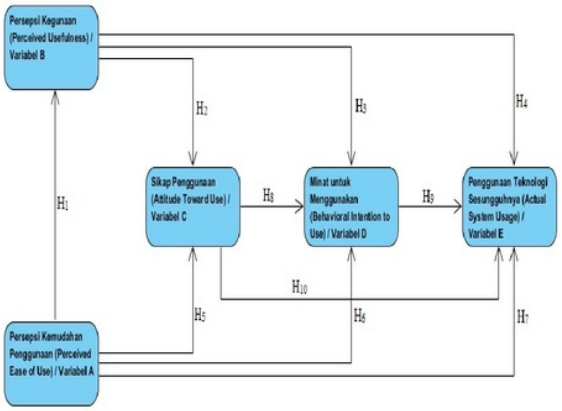
II. Research Design

Literature Study is a method in the writing of this article which is done by collecting, identifying and reviewing previous studies about government services using social media. Systematic Literature Review used in this article offers rigorous standards, not only intended to summarize the researches that have been done before but include elements of analytical criticism [4].

The evaluation method used in this research is Technology Acceptance Model (TAM), which is a classic information system model developed to explain the behaviour of the use of computers and factors related to technology acceptance [5].

The use of TAM is based on individuals who have control over whether they use the system or not [6]. The factors in the model, perceived ease of use, perceived usefulness, and attitude toward using are attributes or characteristics of the system, such as the overall design and features of the system, user skills and abilities, and user beliefs and attitudes towards the system. Behavioural Intention Use is an important factor that determines whether the user will actually utilize the system [7].

1) Hypothesis Test of Research Variables Correlation



A.

Fig. 2. Hypothesis Test of Research Variables Correlation

TABLE I. Correlation Hypothesis Test

No	Hypothesis
H1	Significant positive relation on PEOU variable to PU variable.
H2	Significant positive relation on PU variable to ATT toward using variable.
H3	Significant positive relation on PU variable to BI use variable.
H4	Significant positive relation on PU variable to ASU variable.
H5	Significant positive relation on PEOU variable to ATT toward using variable.
H6	There is a significant positive relation on PEOU variable to BI use variable.
H7	Significant positive relation on PEOU variable to ASU variable.
H8	Significant positive relation on ATT toward using variable to BI use variable.
H9	Significant positive relation on BI use variable to ASU variable.
H10	There is a significant positive relation on ATT toward using variable to ASU variable.

No	Hypothesis
$H_{1.0}$	No significant positive relation PEOU variable to PU variable.
$H_{2.0}$	No significant positive relation on PU variable to ATT toward using variable.
$H_{3.0}$	No significant positive relation on PU variable to BI use variable.
$H_{4.0}$	No significant positive relation on PU variable to ASU variable.

$H_{5.0}$	No significant positive relation on PEOU variable to ATT toward using variable.
$H_{6.0}$	No significant positive relation on PEOU variable to BI use variable.
$H_{7.0}$	No significant positive relation on PEOU variable to ASU variable.
$H_{8.0}$	No significant positive relation on ATT toward using variable to BI use variable.
$H_{9.0}$	No significant positive relation on BI use variable to ASU variable.
$H_{10.0}$	No significant positive relation on ATT toward using variable to ASU variable.

2) Hypothesis Test of Regression (Simple Regression) Research Variable

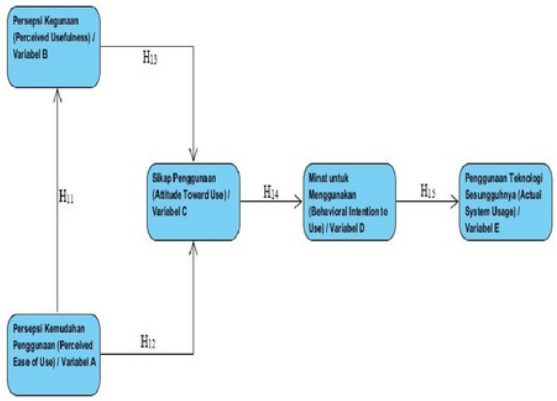


Fig. 3. Hypothesis Test of Regression (Simple Regression) Research Variable

III. RESULT AND DISCUSSION

A. Research Result

The results of the study with the number of samples or respondents are 108 respondents. The questionnaire was made of 19 statements in Indonesian, and then the questionnaires are distributed online using Google Form. Where in this study, profiles of respondents are differentiated based on gender, age, last education, and job.

In this research, the method of analysis used was Technology Acceptance Model. The statements that have been made were tested using the application of IBM SPSS Statistics ver24. Each statement was tested for its validity and reliability to ensure that the statements used by the researcher are capable of measuring the research variables and knowing whether the answer to the statement is consistent and stable over time. The result of validity test to statement was declared valid because Pearson Correlation value ⩾ r table or in other words, r arithmetic ⩾ r table with significant value 0.05 or 5% and can be said reliable if Cronbach's Alpha ⩾ 0.70 and included into the category of sufficient reliability.

This study used five variables to see the user perception of social media for Government services, namely:

- Perceived Ease of Use or variable A,
- Perceived Usefulness or variable B,
- Attitude Toward Using or variable C,
- Behavioural Intention Use or variable D,
- Actual System Usage or variable E

The above variables are tested with Correlation Hypothesis and Regression Hypothesis to find out the level of relationship and the level of dependence between variables.

Based on the results of testing of the Correlation Hypothesis, the following results are obtained:

- The result of hypothesis test of Perceived Ease of Use variable or variable A to Perceived Usefulness or variable B can be concluded that there is a significant positive correlation because r test has value 0.725 ⩾ r table 0.1890.
- The result of hypothesis test of Perceived Usefulness variable or variable B to Attitude toward Using variable or variable C can be concluded that there is a significant positive relationship because r test has value 0.765 ⩾ r table 0.1890.
- The result of hypothesis test of Perceived Usefulness variable or variable B to Behavioural Intention Use variable or variable D can be concluded that there is a significant positive relationship because r test has value 0.583 ⩾ r table 0.1890.
- The result of hypothesis test of Perceived Usefulness variable or variable B to Actual System Usage variable or variable E can be concluded that there is a significant positive relationship because r test has value 0.730 ⩾ r table 0.1890.
- The result of hypothesis test of Perceived Ease of Use or variable A to Attitude toward Using or variable C can be concluded that there is a significant positive correlation because r test has value 0.787 ⩾ r table 0.1890.
- The result of hypothesis test of Perceived Ease of Use or variable A to Behavioural Intention Use or variable D can be concluded that there is a significant positive relationship because r test has value 0.500 ⩾ r table 0. 1890.
- The result of hypothesis test of Perceived Ease of Use or variable A to Actual System Usage variable or variable E can be concluded that there is a significant positive relationship because r test has value 0.622 ⩾ r table 0.1890.
- The result of hypothesis test of Attitude toward Using variable or C variable to Behavioural Intention Use variable or D variable can be concluded that there is a significant positive relationship because r test has value 0.597 ⩾ r table 0.1890.
- The result of hypothesis test of Behavioural Intention Use variable or D variable to Actual System Usage or E variable can be concluded that there is a significant positive correlation because r test has 0.596 ⩾ r table 0.1890.
- The result of hypothesis test of Attitude toward Using variable or C variable to Actual System Usage variable or E variable can be concluded that there is a significant positive relationship because r test has value 0.726 ⩾ r table 0.1890.

Based on the results of the Regression Hypothesis (Simple Regression), the following results are obtained:

- There is a significant positive influence on "Perceived Ease of Use variable to Perceived Usefulness variable" or variable A to variable B. From the output is also known the t-test equal to 10.861 with a significance value of 0.000 < 0.05, Coefficient of determination (R2) or R Square 0.527 (52.7%), and the rest are influenced by other variables.
- There is a significant positive influence on Perceived Ease of Use variable to Attitude toward Using variable. From the output is also known the t-test equal to 13.175 with the significance value of 0.000 < 0.05, coefficient of determination (R2) or R Square 0.621 (62.1%), and the rest are influenced by other variables.
- There is a positive influence on Perceived Usefulness variable to Attitude toward Using variable. From the output is also known the t-test equal to 12.272 with significance value 0.000 < 0.05, coefficient of determination (R2) or R Square 0.587 (58.7%), and the rest are influenced by other variables.
- There is a significant positive influence on Attitude toward Using variable to Behavioural Intention Use variable. From the output is also known the t-test to 7.675 with significance value 0.000 < 0.05, coefficient of determination (R2) or R Square 0.357 (35.7%).
- There is a significant positive influence on Behavioural Intention Use variable to Actual System Usage variable. From the output is also known the t-test equal to 7.660 with significance value 0.000 < 0.05, coefficient of determination (R2) or R Square 0.356 (35.6%), and the rest are influenced by other variables.

B. Discussion

Social media application of Jakarta Smart City is available in the App Store and Play Store. In Early 2016, this application has been downloaded by about 300,000 users. The government is targeting 2 million users this year. This application is created by the Provincial Government of DKI Jakarta to be a means for public complaints. There are 17 types of complaints in social media Smart City. The type of complaint includes broken road, lack of street light, traffic jam, flood and various other problems. Through social media application, the society can communicate directly with the government or private sector with the public interest. When people want to leave the complaint, the first step is to take a photo of the problem encountered, then choose the category, and enter the title and explanation of the report. After the complaint has been made into the social media application of Smart City, the government will provide a response. The report that is still pending has a 'red round' sign in the display of the complaint form, the one that is being processed has 'round yellow', and the one that has been completed has 'round green'.

Growth in the utilization of information technology and social media is very rapid. The government is also very dependent on the information technology to provide public services at all levels, aiming to improve service quality and efficiency. The advantage of the application exists in the Smart City media is the designer has added flexibility in designing the social media so that the service and content provided are tailored to the needs of society. In a European study, [8] mention that the utilization of government services is still low. This is supported by the opinion of [9] that community participation in implementing the Smart City is necessary because society has a significant role in the development, but community participation in the application of Smart City is still low. For the reasons above, it needs the development of ways to measure and evaluate the initiative success of social media Smart City. Reference [10] identified the concept of perceived quality and satisfaction as the two most important factors for the evaluation of multi-service organization.

IV. CONCLUSION

Based on the results obtained in the Regression Test, it showed that all hypotheses or assumptions have an influence on other variables. In this test, there is the biggest hypothesis or assumption that is the second hypothesis, Perceived Ease of Use variable to Attitude toward Using with the coefficient value equal to 0.788 and has significant influence that is 62.1%. This means that variable A is related to variable C and has the greatest influence over the others. It can be concluded that if the application is easy to use, then there is a direct influence that is the user attitude will continue to use the same attitude.

At this time, the quality assessment in the public sector is relatively less researched. Most studies related to government services focused on the health sector and education. Government institutions face the challenge of improving the quality of competitive services. The result of standard measurement for customer satisfaction on government organization is used to help find the weakness of the service and correct it. The interface is made to be more user-friendly to ensure the effective service. So, it is necessary to develop the system continuously. Perceived quality is one of the important determinants of the success of social media application, therefore needs identification of the user's perception and expectations.

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